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POPULAR EVERGREEN TREES.

The use of evergreens is becoming yearly more and more appreciated, both as effective in ornamental planting and as an item of practical economy in the matter of hedges and screens for protection of half hardy plants, orchards, or buildings from cold and harsh winds and storms.

In ornamental planting their use is often very imperfectly understood, and many places are rendered gloomy and dark from their too free use in the foreground, or immediately about the house. There is a great deal of beauty in evergreens, but as a class for effective scenery creative of varied beauty, they have not the qualities that are embraced in the changing character from month to month of deciduous trees. For perfect scenery, however, covering the entire year, it would be impossible to dispense with evergreens. If used judiciously in arrangement, sparingly in the foreground, and using those of the lightest and most vivid shades of green in foliage, grouping them at the same time with mountain ash, euonymus or strawberry tree, etc., with their red clusters of fruit in winter, and massing the background with varieties of dark foliage, great effect may be produced, and a pleasant life-like character given to grounds that otherwise in the winter season would be barren and dreary.

Some few years since, many regarded the transplanting of evergreens as one of the difficult items in arboriculture, requiring the skill and experience of a practical gardener. It was also counted unsafe to move them except at particular seasons of the year, or with balls of earth attached, and a few planters yet hold to these early views; but those of more practice find that it is no more difficult to transplant an evergreen when taken from the nursery than to perform the same operation with any deciduous tree. It is true there are exceptions among evergreens, some proving more difficult than others, but the instances or kinds are not more numerous than with deciduous trees.

In transplanting, it is only requisite to remember that the tree has its leaves on, and that there is consequently a constant demand upon the roots for evaporation, and therefore it will not do to permit them to get dry. With small-sized trees, a root nearly corresponding with the top is generally procured when the trees have been rightly grown in the nursery, and cutting in the top is unnecessary; but in the case of removal of trees six feet or more in

height, unless extraordinary care is taken, a great reduction of root is the result, and then it is advisable always to shorten in the length of the branches corresponding with the apparent loss of roots the tree has sustained.

A very great variety of evergreens have been introduced during the past fifteen or twenty years, but of them few have proved of a hardihood or beauty to command notice as trees for popular use, and as in these pages we write for the general public rather than for a few amateurs, we shall only describe such as may be safely depended upon in all locations.

The White Pine. *Pinus strobus.*—The White or Weymouth Pine is common in various parts of the Union, and deserving of a first place in every collection. It is of rapid growth, beautiful in every stage,

Fig. 47.—*The White Pine.*

from a small plant of one foot high to that of a stately tree towering one hundred or more feet in the air, and swaying its horizontal tiers of branches and tufts of airy light-green foliage to the breeze. When grown in strong soil it acquires a thick, compact form; but in soils of a gravelly or sandy nature, somewhat dry and poor, its shoots and trunk harmonize in their length and openness to the airy light cast of its foliage, and it there becomes one of the most beautiful of evergreens in its graceful tapering form and easy broken outline. For grouping with the larch, birch, etc., it is one of the most appropriate among evergreens; and for planting in close proximity to buildings or points toward which it desired to direct attention, it is particularly well suited. As a hedge or screen plant it bears the shears well, and

forms a wall second only to the hemlock or Norway spruce.

THE BHOTAN PINE. *Pinus excelsa.*—This variety resembles the white pine, except that its foliage is longer and its branches somewhat pendulous, but in our Northern States it can not be regarded as perfectly hardy. In the southern Middle States it is one of the finest among evergreens, and should be freely planted.

THE SWISS STONE PINE. *Pinus cembra.*—The Cembrian or Swiss Stone Pine is a very compact and somewhat slow-growing variety, resembling the white pine, except that its foliage is shorter and more stiff. It is well suited to the foreground of groups of that variety, and for positions requiring a tree of less size. It is perfectly hardy, and really very handsome.

THE YELLOW PINE. *Pinus mitis.*—This

FIG. 48.—*The Austrian Pine.*

is a very handsome variety when well grown, but while young its growth is quite slow, and on that account it is rarely grown or planted. Its foliage is a dark rich green, long and flexible.

THE PITCH PINE. *Pinus rigida.*—For the purpose of creating a wild and somewhat romantic effect upon some rocky hillside, or in the formation of a broken group, the pitch pine may be used with good effect; but as a tree for general use in ornamental planting, the dark rich green of its foliage, and the facility with which it can be grown in any soil, are its only claims to notice.

THE NORWAY PINE. *Pinus resinosa.*—The Red or Norway Pine is of rapid growth, quite handsome while young, its

foliage being a dark rich green; but as it acquires age it becomes sometimes too open and sparse of foliage to render it specially desirable, except in large grounds. Where there is room for several trees of a like habit and color of foliage in the formation of masses, we should use one or more of this variety.

THE AUSTRIAN PINE. *Pinus Austriaca.*—The Austrian Pine in rich deep soils forms one of the most dense trees of the whole pine family. It is of rapid growth, with rich deep blue-green foliage, that for backgrounds or masses is admirably created. As a single tree, also, upon a lawn, it is always beautiful; and, when the scenery will admit, groups of this pine with the tulip tree, mountain ash, dogwood, etc., are exceedingly effective.

There is a Southern Pine—*Pinus Australis*—native of our Southern States, that has leaves much longer than the Austriaca,

FIG. 49.—*The Russian Pine.*

and of a lighter more yellow green. It, however, is not hardy in the middle Northern States unless shielded, or surrounded, in fact, with other evergreens. South, where it is hardy, few varieties surpass it in beauty.

THE RUSSIAN PINE. *Pinus rigensis.*—This is a variety claimed by some writers to be so like unto the Scotch Pine—*P. sylvestris*—as not to be worthy of rank as a species. Trees, however, that we have imported and grown are so entirely different from that variety, that we must claim it deserving a special rank. The tree is of about as rapid growth as the Austrian, with its limbs and branches more loose and open or longer spaced, while its foliage is more in tufts, much longer than the Austrian, and of a lighter more yellowish green, very bright and clear. It is nearer to Benthamiana than any other variety with which we have had oppor-

tunity to compare it. In groups or masses with the Scotch, Corsican, and Austrian, it forms yet another shade, and we have found its use a valuable addition in producing effect.

THE BANKSIAN PINE. *Pinus Banksiana.*—This variety is classed as a scrub pine of low slow growth and little value, and so we regarded it twenty-five years ago, when we procured specimens of it in the barren sands of islands in Lake Michigan. Those same plants, however, are now some of them trees forty feet high and extremely beautiful. It has a swayed drooping habit as it grows, but makes a conical and very graceful tree. The foliage is short, light yellowish green, and so unlike any other variety that it is extremely valuable even

FIG. 50.—*The Scotch Pine.*

in grounds of quite limited extent. It is perfectly hardy.

THE SCOTCH PINE. *Pinus sylvestris.*—The Scotch Pine is perhaps one of the most rapid growers among pines, and is also very easy of management transplanting, with rarely a failure, and growing freely in almost any soil or situation. While young it forms a pretty compact tree, but as it acquires age the lower limbs sway toward the ground, giving it rather a picturesque than beautiful appearance. The low price at which trees of it have been sold, together with its easy and rapid growth, have induced its planting, until we confess to its having become to us wearisome. It may be sparingly introduced in the formation of groups or masses,

and for picturesque distant views, and for belts or masses for breaking the force of storms and wind it is very desirable; but as a single tree, or for groups in small grounds, we prefer to leave it out.

THE CORSICAN PINE. *Pinus larico.*—The Corsican Pine is a variety between the Scotch and Austrian—with the general habit of growth of the Scotch, perhaps not as much sway to its branches as it grows old—leaves somewhat longer than the Scotch, but not as long or as dark a green as the Austrian, more yellowish. It transplants and grows with the same facility as the Scotch, and is desirable as a variety and to form groups or masses with that or other varieties.

THE BENTHAM PINE. *Pinus Benthamiana.*—The Bentham Pine is comparatively of recent introduction, and where spreading stateliness of character is wanted either in a single tree or group, that or the Heavy Wooded Pine—*Pinus ponderosa*—promise to supply the object. It is of rapid

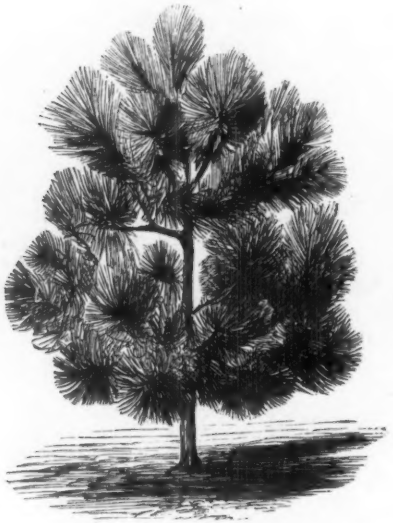

FIG. 51.—*The Ponderous Pine.*

growth, with dark green foliage, long leaves in tufts, but instead of being compact, it is open, and stately and majestic in form. We should group it with the European sycamore, the tulip or magnolia trees.

THE HEAVY WOODED PINE. *Pinus ponderosa.*—The Ponderous or Heavy Wooded Pine is another variety like the last-named, of comparatively recent introduction. It is also of a stately habit, with long leaves of a rich yellow green color. This as well as Bentham's Pine attain a very large size when fully grown, and are therefore adapted only to positions where room can be given them in future years. We do not know how well they may bear pinching or rubbing back to reduce their size and increase their compactness, but judging from their habit, doubt the value of such practice with them.

[TO BE CONTINUED.]

DESIGNS IN RURAL ARCHITECTURE.—No. 21.

GEO. E. HARNEY, ARCHITECT, COLD SPRING, N. Y.

THE square, or nearly square, house, with the French or Mansard roof, seems to be especially appropriate for the narrow lots in the suburbs and in larger country towns.

FIG. 52.—*A French Roof House.*

FIG. 53.—*Ground Plan.*

Of late years this style has become extremely popular, and, we think, deservedly so, since it undoubtedly gives a greater amount of available room than any of the

other modes, and is always in good keeping with the somewhat formal surroundings, in a thickly settled neighborhood.

From the peculiar construction of the roof, the attics of such houses may contain as many, and nearly as good chambers, as the second floor, and, on that account, a house requiring a certain amount of accommodation may be smaller than if it were in any of the other styles.

The plan, too, providing a hall in the middle with rooms on either side, has always been a favorite, particularly with practical, matter-of-fact people, who like to see every inch accounted for, and who have a horror of twists and turns, and out-of-the-way corners.

In the design here given will be found accommodation for quite a large family, with considerable economy of space, united, we think, to a respectable appearance of exterior. The house is supposed to be situated on the corner of the street, the entrance portico being on one front and a large bay window on the other.

The entrance hall, containing the staircase, is eight feet wide; it opens into the parlor on the right hand, and into the library and dining-room on the left; and, at the extreme end into another hall containing the private stairways, to the cellar and the chambers.

The parlor is sixteen feet by twenty-four, exclusive of a roomy bay window opening from its longest side, and overlooking the street.

The library is sixteen feet square, and the dining-room sixteen feet by eighteen. Connecting the dining-room and kitchen is a large pantry fitted up with shelves and cupboards, and other conveniences usually found in such places.

The kitchen is sixteen feet by eighteen, and is provided with a range, hot and cold water fixtures complete, dressers, etc., and has attached a pantry or sink room, through which we pass to the yard.

The basement contains a laundry, two large store-rooms, and an open cellar with a cemented floor and a plastered ceiling. There are also provided a furnace, coal-bins, ash-box, wine-closet, etc., etc.

The second floor contains four chambers in the main body of the house, two of which have large dressing-rooms attached, and two smaller chambers in the kitchen wing, besides a bathing-room and several closets.

The attic has four chambers, each of which is provided with a large closet, and another room which may be used as a store-room.

The ceilings measure ten and a half, ten, and nine feet high in the several stories.

Roots for Producing Seed.—In the breeding of stock the pedigree of parentage is regarded as a great point, and he who desires to rear a really valuable animal must look to obtain parents as near perfect as may be possible. In vegetable life we believe this same principle is equally important to be considered, and he who would produce seeds giving promise of advanced value in their growth-product should carefully examine every beet, carrot, or parsnep root, every cabbage, etc., looking back to the seed from which it was grown, as well as to the fact of the present root being as near perfection as possible. Good seeds can not be grown from imperfect or unhealthy roots or plants, no more than good stock can be produced from unhealthy animals. Blood will tell in vegetable as well as animal life, and the best seeds and plants will be grown by those who regard the thousands of facts that have been published in support of this truth.

PROPAGATION OF PLANTS.—No. 1.

BY A. S. FULLER.

THE different modes of propagating plants may be classed as follows, namely:

Propagating by seeds.
" " cuttings.
" " layers.
" " suckers and division of the roots.
" " budding and grafting.

These methods may be subdivided into

Cuttings of ripe wood.
" " green wood.
" " the leaves.
" " the roots.
By layers of ripe wood.
" " green wood.
Grafting with ripe wood.
" " green wood.
" by inarching and approach.

All the known species and varieties of plants may be multiplied by some one of these methods, and some can be readily propagated by each and every one of them. But there are certain principles which serve as a guide to the propagator in the different modes of operation that it is well to understand before proceeding to the more practical part of the subject. Although when the great diversity of character as well as the vitality of plants is considered, it can not be expected that any general rule can be given that will be applicable to every case or altogether faultless, yet for the purpose of dispelling that mystery with which the novice often supposes the various modes of propagation to be surrounded, I shall give a brief synopsis of the general principles connected therewith, together with some of the more common methods of their application.

PROPAGATION BY SEEDS.

The perpetuation of the greater portion of the known species of plants is directly by their seeds, which in their wild state they perfect with great uniformity; but when cultivated, the vital forces are often disturbed, and a portion is directed into other than the natural channels. The effect of this we see in the double flower, and the increased size of many of our fruits. The seeds of so-called improved plants in a great measure become abortive, and we can no longer depend upon them as a means of reproduction, not only because of the want of vitality which naturally belonged to them, but in the course of cultivation there has been such an intermingling of species, as well as variations, that scarcely any variety of cultivated fruit will reproduce an exact counterpart of itself from seed. Therefore we have to resort to other modes of propagation to perpetuate any particular variety. But this disposition among cultivated plants to change from their normal character is often turned to valuable account, for to this variableness we are indebted for many of the estimable fruits and flowers now in cultivation. It is therefore of the highest importance that the propagation from seed of those plants which are so variable when multiplied in this manner should not be overlooked.

Seeds when perfect contain the rudiments of a plant, together with a peculiar substance which is accumulated at the time of their formation, and designed as food for the embryo plant during its germination; consequently when seeds are to be preserved for any length of time, it is important that they be not exposed to any conditions that will destroy either the germ or that food which is stored up with it for its future use. Under what particular circumstances seeds will preserve their vitality the longest, it is very difficult to determine, as some varieties will remain sound for years, while with others a few days is sufficient for their destruction. This diversity in the vitality of seeds is not wholly confined to any particular genus, but is observable in different species of the same. For instance, the seeds of the sugar maple (Acer saccharinum) may be preserved in a cool, dry place for one or two years, and then be made to grow; while the seeds of the silver

maple (Acer dasycarpum), if subjected to the same exposure, would lose their vitality in a few weeks. But there are other things that serve as a guide in the propation of these two species; by observation we learn that the seeds of most of those trees, like the silver maple, which ripen in the early part of the season, if placed in the soil so soon as ripe, will make sufficient growth to withstand the cold of the ensuing winter; while the seeds of the sugar maple, which ripens late in the season, do not germinate until the following spring, even when planted in the autumn. So far as relates to plants indigenous to any locality, it may be taken as a rule, that the proper time for planting the seeds is as soon as they are fully matured.

A cool and moderately dry atmosphere is the best in which to keep most kinds of vegetable or tree seeds, although some will retain their vitality for a long time if immersed in water, provided it is kept at an even and low temperature. This is doubtless owing to the peculiar structure of the seeds, and the exclusion of air and heat therefrom. Those varieties of seeds that are covered with a hard silicious or horn-like covering may be preserved in air-tight cases made of glass or metal, and a similar plan may be adopted with some of those kinds that are naturally dry and are covered with a thin porous covering like the seed of the common onion. But seeds that are of a watery nature, if entirely excluded from the air and exposed to a temperature much above 32°, will soon decay. I am confident that a cool and regular temperature is of more importance than anything that may happen to them hygrometrically; for we find seeds that have been buried deeply in the earth remaining unchanged for many years, yet so soon as they are brought to the surface, where air, moisture, and heat act together upon them, they immediately germinate. If supplied with the requisite moisture, all seeds grow more readily when near the suface of the soil than when buried deeply, for the reasons just given; therefore we should endeavor to so place them in the soil that the air and heat can reach them, but at the same time exclude the light, for seeds do not require light to assist them in germination.

In aquatic plants the case is reversed to some extent, for they usually sink to the bottom and become buried in the mud, from which they germinate, sending their stems and leaves to the surface, their seeds obtaining the requisite amount of heat from the soil below. But here we again meet with variations from any general rule, because the seeds of some aquatic plants are light and float on the surface, and germinate in this position, the roots descending to the soil, if the water is not too deep. Usually, however, light seeds are thrown upon the shore, and there take root, and their under-ground stems stretch out into deep water.

The proper depth to cover seeds depends very much upon their size and power of throwing up their stems. It has often been observed that seeds should be covered with a depth of soil equal to their diameter; that is, if a seed is one half inch in diameter it should be covered with one half inch of soil, and without doubt this would be the proper depth, provided the requisite amount of moisture could be always maintained; but as it is difficult to do this, especially when seeds are sown in the open ground, this rule is not of general application.

Neither can there be any rule given as to temperature, for some seeds will germinate at two or three degrees above the freezing-point, while others require a heat from 80 to 100°. When seeds have once started to grow, they can not be again reduced to a dormant state without causing their destruction; this should be always borne in mind, for from this cause alone more seeds are annually destroyed than from any other; as they are hidden in the soil, we are apt to neglect giving them an ample supply of moisture at the time of

their greatest need. The soil in which seeds are sown should be made fine and permeable, not only to admit air and heat and to retain moisture, but so that the radicle or young root may penetrate the earth without hindrance, and allow the stem to grow upright unimpeded. The soil should be made deep, and of such a nature that the young plant will receive a constant and regular supply of moisture. Nature serves as a guide to us in many of the operations connected with the art of propagation, yet it should be remembered that the sowing of seeds and the planting of trees by man is an artificial operation instead of a natural one; and we follow nature only when it serves our purpose, or as we are compelled to by natural laws. For nature is so plastic that she allows us to mold her gifts into forms that suit our wants and tastes, confining us only within certain limits, which it is difficult for man to determine. Nature perfects and likewise destroys, and thus that equilibrium is preserved which is observable throughout the vegetable kingdom. If we scatter seeds in every instance exactly as is done by nature, we should not make more than one in ten thousand grow. The wild apple-tree that perfects its thousands of seeds, drops them upon the earth inclosed in a covering that soon decays, and the peculiar acid which it contains, or which is generated while undergoing this decay, destroys the seeds within; not a seed grows unless it is freed from its prison either by its fall or by the aid of insect or animal. This shows the wisdom of nature, for if every seed should grow, the struggle that would be constantly going on between offspring and parent would be such as to prevent the full development of either. This lesson which we learn by observing the apple may serve to guide us in our operations when we come to propagate it and other species of like nature. For it shows that although nature may fully develop and perfect her fruits, yet she leaves it to us to encourage those varieties which we desire, and by the assistance of art we may multiply these with such rapidity that all our wants may be fully supplied.

[TO BE CONTINUED.]

CHEAP ADVICE TO NURSERYMEN.

BY E. FERRAND, DETROIT, MICH.

I HAVE had many inquiries concerning the treatment of pear seed, several complaining that notwithstanding the good quality of our seed, it did not come up the first year, necessitating two years' care and labor, leaving all the while the seed exposed to the depredations of insects, and at the same time making it very difficult to keep the ground clear of weeds. I will venture to give a few hints on the subject. Pear seed sown in the fall will not fail to grow in spring if of good quality; but there are many objections to sowing it at that time, the chief one being the difficulty of getting fresh seed soon enough, therefore the best method is the following: Get the seed at any time in April, wash it well in three or four waters, rubbing it between the hands in order to wash out the mucilage that sticks to the seed and makes a waterproof envelope to it; then mix up your seed with fine gravel or sand, put in boxes, and place them in a cellar until the time of sowing, which must be done as early as possible in order to obtain fine and large stocks; the sand in the boxes should be soaked through with water once, which is enough. We bore some holes in the bottom to let out excess of water. If you get your seed late, and only at sowing time, wash it as above, then sow it—it will come up, even if sown so late as the 15th of May.

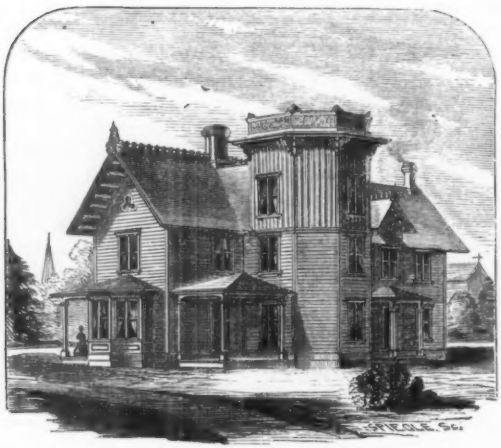

FIG. 54.—*Country House—Perspective View.*

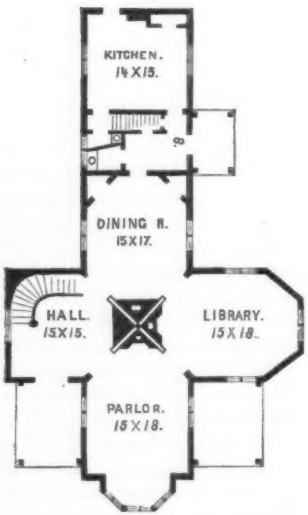

FIG. 55.—*First Floor.*

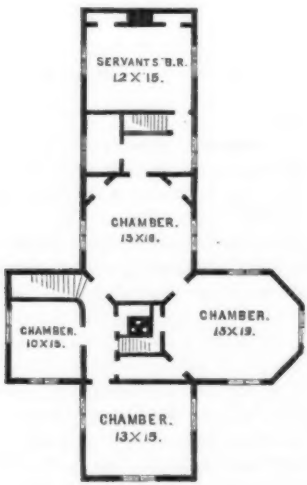

FIG. 56.—*Second Floor.*

A COUNTRY HOUSE.

The design of this house was made for the purpose of giving each room a sunny southern exposure, and out of ten rooms nine have at least one lookout to the south-east, and one, the small room over the hall, has a southwest window. There is a fine cellar under the whole house, the rear of which can be finished for a laundry, and has an outside cellar door.

The principal floor is so managed that the spacious hall with winding staircase presents an attractive feature on entering. The chimney is in the center of the house, and sliding doors connect each of the principal rooms, so that when occasion requires, hall, parlor, library, and dining-room may be thrown together, the octagon form of these rooms adding much to their beauty; back of the dining-room is a side hall, closets, side door, and back stairway, and back of these the kitchen, provided with sink and force pump, connecting with a thoroughly constructed cistern of 8,000 gallons capacity, which receives all the water from a slate roof. Rain water from a slate roof is pure and clean, free from color, and used with ice in summer is better and healthier than well water.

The kitchen is well ventilated, windows both sides, and doors so arranged as to secure all comfort; an independent chimney, etc.

The second floor has large and well-ventilated bedrooms, ceilings are square and of good height, abundant closet room, etc.

Above this, in the tower, is a fine octagon room of fifteen feet radius, that can be used for a bedroom, smoking-room, or any other purpose; a good garret also for storage, etc.

The house to be heated with a furnace. In the parlor and library are marble mantles, and each is fitted with Dixon's low-down Philadelphia polished steel grates for burning wood or coal—the best open fire known.

All the wood-work about the house is of selected stuff, and handsomely stained and varnished—the best and most effective interior finish. The walls and cornices are hard finished in the best manner.

The frame is substantial, and lined throughout with unworked lumber, and covered with narrow-lapped siding, making a stiff, warm house.

All the work has been done by the day, in the best and most substantial manner.

The house is located on the high dividing ridge between the Hackensack and Passaic rivers, one hundred feet above tide-water; ten miles from Broadway, and five eighths of a mile from the first station on the Erie Railway; from thirty-three to forty minutes is the running time from New York to the station, and twelve trains each way daily afford the most ample accommodation. A New Yorker living above Thirty-eighth Street has no such facilities for getting to and from his business if below Chambers Street; he must spend more time, accept the poorest class of cars or coaches, pay more for his ride, and in stormy weather hang up or go a-foot; he can not get home with the same reliance and promptness as he could if he lived out on the Erie Railway. The fact exists beyond all contrary proof, that business men can and do every day go ten miles out into the broad, beautiful, and healthy country that lies beyond the west bank of the Hudson in less time and with greater comfort and certainty than they can go from Chambers Street to any point above Thirty-eighth Street in New York. They can, if necessary, be at their business at 7 A.M., and leave it as late as 11 P.M.; enjoy the amusements of the city, and, if preferred, attend church there on Sundays;

live in the country and enjoy every luxury of city life, and all those luxuries unknown to city residents.

The city of New York is now, in point of population, which is the measure of size, rapidly falling behindhand in comparison with its suburbs; draw a circle of twenty miles radius, with its center at Union Park, and it would inclose a population not varying much from 2,000,000, of which more than one half are outside the city limits of New York; this suburban population is growing at a rate, per cent., nearly two and a half times faster than the population of the city.

Without some rapid method of reaching up town, or annexation of territory beyond city limits, in ten years New York becomes the second city in the country. In the same period, the comparatively unknown city of Newark swallows its suburbs, and becomes a competitor for the fourth position on the list. In accordance with the rate of growth for the last fifty years, this circle of twenty miles radius will contain in fifteen years more a population of 4,000,000, and the value of property will be enhanced enormously.

It does not vary much from twenty years since commutation rates on steam railroads were generally introduced; in fact, many of the principal roads have been built since then. No railroad company that we know of has ever advertised commutation fares or trains, and it is safe to say that a large majority of the citizens of New York are unaware of their existence. The time is now at hand when business men will ascertain their bearing, and even this present spring will see a growth of suburban population hitherto unparalleled.

At the head of the list, in all the requirements for steam suburban travel for business men who must under all circumstances be carried promptly, stands the Erie Railway. It is not only the best, but has peculiarities of its own which no other road enjoys. It is the largest railroad corporation running out of the city—its resources in engines and cars are of the most extensive kind. The cars are wider, larger, longer, and more elegantly fitted up than any other. It has full telegraphic communication and a broad guage double track, a consideration of the utmost importance to a daily traveler. Its commutation rates are lower than any other road, and free from all petty restrictions and annoyances. In punctuality, ease, comfort, safety, freedom from dust and noise it takes the lead, and can always keep it. It is managed on broad-guage principles, and is the first road that is adopting the finished nicety of construction and grade that characterizes the suburban roads of London.

This matter of going home daily by steam will bear considerable ventilation; it is difficult to say what is the best medium of time one can devote to it. Some parties we know ride sixty miles in and out daily—an hour and one half is very common. But to find every desirable advantage, there is no necessity of exceeding sixty minutes from place of business to place of residence. In New Jersey, within fifty minutes of the City Hall, New York, including the time required to walk to the ferry, the time in crossing, taking the train, and the walk or ride home from the station, are thousands of acres of building sites of the very best class, in superior, noted health localities that are now undeveloped and unknown to the great world that is clustering thicker and thicker in the limited space of this busy hive; but considerations of time, of money, and, last thought of, but not least, health, must add to the throng now setting toward the elegant suburbs of this city.

New York capitalists have during the last winter purchased about eight hundred acres of land lying about the first depot of the Erie Railway, ten miles from New York, which is now being divided into country seats of from one to five acres. A large number of dwellings are to be put up, a first-class hotel opened the first of May, and schools and other public improvements carried out.

BEAUTY OF AMERICA—(APPLE).

BY F. R. ELLIOTT, CLEVELAND, OHIO.

FRUIT, from medium to large size; *form*, globular, flattened, broader than long; *stem*, short and slender; *cavity*, narrow, deep, and regular; *calyx*, small, closed; *basin*, shallow, with a slight, knobby, uneven surface; *color*, a ground-work of greenish yellow, becoming a rich pale yellow when fully ripe, with irregular, broken stripes of a dull crimson red; surface often a little appearance of russety, with numerous small, star-like specks of russet, and with russet covering the cavity around the stem; *flesh*, yellowish, and, in full-ripe specimens, occasionally has a tinge of pink

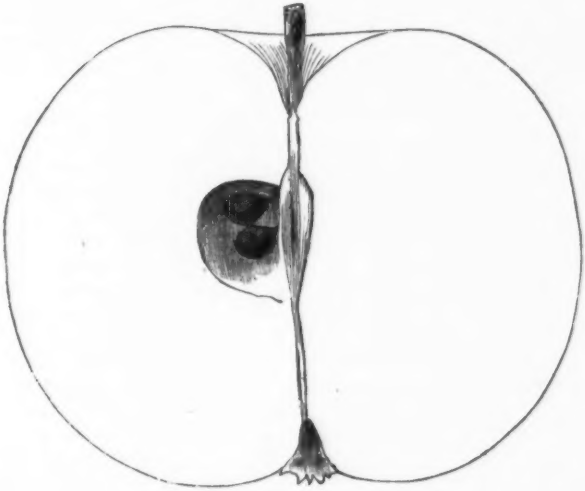

FIG. 57.—*Beauty of America*—(*Apple*).

upon the side or end that has been most exposed to the sun in ripening—tender, breaking, rich, very mild, sub-acid, nearly best; *core*, small; *seeds*, very plump and round, slightly ovate and pointed; *season*, January to March; *tree*, a good fair grower, rather spreading than upright, and a good, regular bearer.

I do not know where this variety originated, and from once having received an impression that it was a *poor bearer*, I discarded it. Subsequent acquaintance with old bearing trees of it convinces me that it is a good bearer, and an apple deserving more extended cultivation.

GRAPE CUTTINGS FROM MODERN HISTORY.

BY JOHN S. REID.

NUMEROUS are the theories of naturalists as to the origin and creation of the vegetable kingdom, some asserting while others deny the Biblical account as related by Moses; but be this as it may, no one who has observed and studied the method and arrangement of the flora of the world, will hesitate to acknowledge and admit that the distribution of the various plants, trees, shrubs, vines, etc., are not the result of chance; but that a wise and well-directed superintendence is over them all.

Take, for example, the flora of Europe and compare it with that of America, and a marked difference will be at once perceived by the most casual observer, although many plants of the same species are found in both hemispheres.

Thus the vegetable kingdom of North America presents more variety than that of any region of similar correspondence or climate in the Old World, although those found on the northern shores of this continent are somewhat in character and resemblance to that found in Europe within the arctic circle, the change and diversity being chiefly within the temperate zones, where plants that are indigenous to America, and grow wild in her forests or on her prairies, require the aid of cultivation and labor in the other countries.

Again, why is it that certain grains are the productions of the European continent, while Indian corn, tobacco, and other great staples are natives of this, we can not say, although we know that the physical conditions of the vegetable kingdom in their regulation and distribution, although much diversified, are mostly included under the idea of climate, among the agencies of which are understood to stand pre-eminent, heat, light, dryness, humidity, rain, frost, snow, etc.

Now the art and science of the agriculturist enable him to modify all of these causes, and to adapt the soil to the several kinds of plants which he wishes to naturalize into the climate of this country from that of Europe, or from some different locality of his own land.

We do not intend going into a scientific discussion of the numerous causes that compel the distribution of plants over the world, but only to intimate that there are causes geographical as well as creative; and that while the eyes of the horticulturist are roaming over the land to discover *the* grape for the million, we wish to guard the novice in grape culture, and inform him that some things *only* can be done, notwithstanding the assertion of some learned Vignerons, who deem themselves the *hub* of Vineland, if we may coin a word for the occasion.

For ourselves, we do not pretend to decide why the wine grape of Europe will not flourish in similar latitudes in America to what it does in Europe; nor why the mild climate of England refuses to perfect its fruit in the open air, when under almost the same parallel in Germany, on the Rhine, it produces the finest of wines.

Our official duties the past year prevented us from being so constant a contributor to the HORTICULTURIST as we should have wished, but although we did not write much, we read the contributions of others with much care and some profit, and approve of the hints thrown out at random by many of them in classifying those grapevines which appear to suit the various localities from which they write. We can not but admire, too, the warmth and animation with which some of them advocate their favorite variety, especially the friends of the Adirondac, a grape

which appears somewhat a myth, for few seem to have seen it in all its glory, away from its native mountains. There was a time, too, when Cincinnati had but one grape of value, the Catawba; now, this old variety has run out, and the Delaware and Ives' seedling are the rage; while under the nursing care of the committee, headed by Dr. Warder, the Concord has obtained the prize as *the* grape of the present hour.

We do not know what Dr. Grant and others may say to this, but we shall accept the award as the last announcement of vine wisdom from the bench, as orthodox authority, although we prefer a well-ripened Delaware, Catawba, or Diana to a bushel of Concords, without any disparagement to the Iona, Israella, or Adirondac grapes, which although we have the vines of, have been so unfortunate not to have fruited.

This past season my vineyard has again been a complete failure, although several varieties, which had been covered during the winter, and somewhat protected by walls and fences, ripened a few grapes, among which were the Delaware, Clinton, and Concord, with my own seedling white grape, Anna Harriet, which fruited some dozen of bunches.

Perhaps your readers may remember that we stated having planted side by side our Delaware, our Iona, and our Adirondac, by way of experiment, which should all have fruited the past season. They stood equally exposed, on one line, six feet apart, supported by a wire trellis; the result was, the Delaware bore two bunches and made good wood, while the Iona showed, but did not ripen its fruit, and the Adirondac wholly failed in wood and fruit. This is the record of *our* experience.

The seedling black grape of which we wrote to you last year did not set but one bunch, and this was picked off before it was ripe by some truant bird or boy; but to all appearance it looks like a grape of some promise, perfectly hardy and of good size. We will report this fall its true merits, should it survive all misfortunes and ripen its fruit.

But let us return to the vine-clad hills of France; let us talk a little of Bingen on the Rhine; let us romance with Don Quixote and Gil Blas on the glorious sherry of Spain; drink of the sweet malaga of Granada, of the fragrant Pedro Ximenes; or enjoy the pure juice of Andalusia, and learn something of that climate which produces these luscious wines, and with what culture the Spanish peasant produces them.

Behold that lazy, lounging Spaniard singing under his vine, as if it was too much trouble to rise from the green, pleasant bank on which he is reclining. With the smallest amount of labor he raises the most luscious of fruits—the grape, almond, fig, orange, pomegranate, and others equally delicious are his—with agricultural instruments after the fashion of the Noachian era, and a mode of culture not many removes above the savage of our wilds; the mountain slopes of Spain and her beautiful valleys are laden with the richness of nature. Here, then, it is not to the man who cultivates the soil, nor to the articles of husbandry, nor to the mode of culture, but chiefly to the selection of the grape for the country, and the climate suitable for its production; and so it is in all the countries where the cultivation of the vine has become a success.

But in these, the utmost regard is paid to the selection of varieties adapted to the soil and climate, well knowing that one variety which may do well in one district may be wholly worthless in another.

Thus the Der Kleine Reissling, or little Reissling of the Rhine, which produces the famous Johannisberg, loses its odor and bouquet on the shores of the Douro, while the richest grapes of France, such as the Frontignac, the Lunel, and Muscatel, wholly fail on the Rhine.

In Spain, on the chalk cliffs of Andalusia, the Ximenes, the Malaga, and Black Alicant

flourish in most unbounded profusion, yielding bountiful harvests of the richest of grapes, producing wine of the greatest strength.

So along the volcanic slopes of Italy and the mountain ranges of Naples, the wine grape grows unequaled, climbing up the hillsides and creeping among the cinders and lava of Vesuvius, fairly luxuriating among the hot volcanic ashes of that famous mountain.

Should we not, then, endeavor to learn wisdom even from the indolent and ignorant peasant, to find out the suitable grape for *our* section of the country? may we not become convinced that as it is in Europe so it will be in America, and that certain kinds are adapted to certain districts of country? so that instead of forcing the Catawba or Norton's Virginia, and other similar kinds to blossom and fruit in the cold, bleak regions of the North, we select such as suits *the* locality, and in the mode and manner of cultivation make up for the want of climate found along the shores of the great sea.

One of the first principles of vegetable physiology is, that we must combine the values of temperature and time, and that heat acts in proportion as it regards its duration and force; and another is, that each species (of plants) requires for each one of its physiological functions certain minimum of temperature at which it will vegetate. Take the grapevine for example, and we find that it requires different temperatures for its several stages of growth and perfect fruition; thus one temperature is required for its germination, and another for its ripening of its fruit; and that as each species can bear a definite range of temperature, and requires a certain amount of heat or time to enable it to perform its functions properly, therefore to arrive at a proper knowledge of the availability of any *one* kind of grapevine that will suit any one special locality, we must study and discover these several temperatures, noting especially the time of flowering, the ripening of the seeds, and the elaboration of the saccharine matter.

The limits of the successful cultivation of the wine grape in Europe are generally fixed where the mean annual temperature is from 50 to 52°, and the summer is not less than from 65 to 66°, and no country whose annual mean temperature falls below these averages can produce wine of a superior quality, or whose vineyards can mature superior grapes.

But in addition to these, the summer and autumn must not only be sufficiently hot, but it is indispensable at a given time, say that which follows the appearance of the seeds, and there should be at least one month of warm dry weather, the mean of which is equal to 66°. Thus, for example, London and Cherbourg, whose annual mean is equal to 50°, but whose summer does not exceed 62°, hence the wine grape there does not succeed; while in Naples, Marseilles, Lisbon, Dijon, Cadiz, and Vienna the summer mean is equal to 70 and 76°. Yet each of these cities has its own peculiar wine and grape, each and all ripening its fruit, and elaborating its juices for superior wine.

Instead of forcing our finer varieties on New England, or even the middle States, let us give them to a latitude and climate whose temperature and soil will develop all the latent richness of their nature; while the Concord, Clinton, and Delaware, with several new varieties, may be successfully cultivated in these States.

We rejoice at the healthy tone which the HORTICULTURIST is giving to the cultivation of the Grape, and esteem every writer who gives his experience unbiased of the several varieties as they each appear before him in his respective region. Some seven years ago our vineyard produced Catawbas equal to those of Kelly's Island at the present day, and our wine ranked second only to Mottier's best; now, for these three years, the Catawaba has completely failed, while the Delaware and Concord are coming into favor, the former

being superior in quality and hardiness, although smaller in bunch and berry, and the Concord larger in the latter two, but inferior in quality in its juices and aroma.

But it is not for the want of a mean temperature similar to some regions of Europe, that many of our grapevines do not succeed in almost every State of our Union east of the Rocky Mountains, but to the want of a proper climate at the critical period of the fruiting of the vine—to the excess or extremes of atmospheric action—to the dryness or wetness—to the cold or heat at these periods. For example, the summer months of June, July, and August in France and Italy range from 66°, 70°, 71°, to 70°, 73°, and 76°, while the same apparent temperature is found from Missouri to New York, but during these months sometimes we have an excess of heat, sending the thermometer up to 100° in the shade, and anon, down it comes to 50°, with rain and excessive moisture, and mildew and rot follow rapidly, and destruction of the grape crop is certain.

We are a firm believer in the successful cultivation of the American grapevine in America; and when we have understood more fully the true nature of our several varieties, and found the proper grapevine for the proper region, then we will make grape-growing productive and profitable; and whether the Delaware and its species may succeed better on the banks of the Hudson than on the banks of the Missouri matters not, the day is fast coming when all along our mighty rivers, from the Rio Grande to the Aroostook, the culture of the grape will become a source of profit and industry, while the production of pure wine from its luscious juices will tend to banish the use, as a beverage, of spirituous liquors, tending to make our people an independent, frugal, industrious, temperate, agricultural nation; for we assert as an uncontrovertible truth, that whenever a nation or people become agricultural in their habits, living on the productions of their own lands, they become a frugal, temperate class, and tend to give tone and character to the whole nation by their precepts and example—a living, working temperance society, without its army of hired orators and paid lecturers, the parasites of a true and benevolent cause.

RED CEDAR AND MILDEW.

BY COL. D. S. DEWEY, HARTFORD, CONN.

In a communication from W. C. Strong, in the October number of the Horticulturist, these sentences occur:

"In this connection, I would ask if any vine-growers have noticed any immunity from mildew to vines trained around cedar posts? I have thought there was a perceptible difference in favor of vines on cedar posts. We might expect this result, for the aroma from the posts is known to be antiseptic, and it is quite powerful when the posts are new."

As it is probable that no definite conclusions have yet been arrived at on this subject, owing to the absence of direct experiment or comparative trial, I venture to offer my opinion on this point, which coincides with that of Mr. Strong, and, probably like his, is only based upon general observation.

All the posts in my vineyard are of red cedar. Their average height above ground is about seven feet, and they stand eight feet apart each way. In the rows, they are connected by horizontal strips of white pine. My vines have never been noticeably troubled with mildew or insects; and those which have happened to be trained nearest to the posts have surpassed the others in general healthfulness of appearance and productiveness.

One single vine, in another locality, near the house, trained entirely on and around a cedar post on which the limbs were left uncut (or partially so), is the thriftiest and most productive vine on my place, free from everything noxious.

This is but inferential testimony, to be sure, and only good so far as it goes; but not without its weight, if it be confirmed by the same kind of testimony from others. The point will undoubtedly be more fully investigated during the coming season, for, as Viticola says, "Mr. Strong's suggestion in regard to cedar posts may prove quite a valuable one."

In this connection I add the following, in the way of parol evidence. A neighbor, whose grapevines for a number of years have been grown and trained, with tolerable success, against a high and tight board fence, with an excellent exposure, has detached his vines for the last year or two from the fence, and caused each one to train itself on and around a cedar post, and considers it quite an improvement in every respect, including, incidentally, immunity from mildew.

The cedars are cut and prepared on the mountain; the leader is cut off so as to leave the body about ten feet long; the limbs on the upper half are shortened in somewhat, and those on the lower half are cut close to the body. When used in garden or vineyard, they are set about three feet in the ground, leaving, of course, about seven feet above the surface. The main objection—and probably the only one—to their extensive use (especially for vineyard purposes) is, that the projecting limbs occupy too much space; but this waste of room is partially offset by the gain of time in taking care of them during the growing season, as they want no tying up of any consequence.

This difficulty can also be met—and it has been done in one instance within my knowledge—by flattening the limbs, so to speak, on two sides; that is, by bending some, and by cutting off others, from two opposite parts, to within a few inches of the body; and leaving the others partly trimmed and partly untrimmed for plashing. Prepared in this manner, and set in rows, with an occasional interweaving of the extremities of the longest branches, a serviceable and durable trellis may be formed, which may be expected to repel insects, and, perchance, mildew, from the combined influence of the wood itself and the facility for natural growth afforded by the manner of construction.

By the way, I have for a long time thought that many of the ills of vine-growth were directly traceable to the restraint which we are apt to put upon our free-growing native varieties. Are not our trellises too procrustean? and our methods of confinement too rigid? Do limb and spray have a fair chance at full natural development? I look upon *motion* as a necessary element in healthy vegetation of all kinds. More of this, perhaps, anon.

The following cut is intended to illustrate the foregoing idea of a cedar trellis.

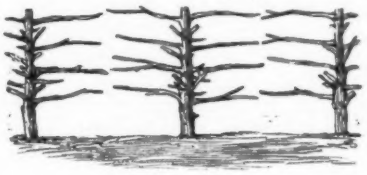

Fig. 58.

The virtue of cedar wood does not consist (as I think, without wishing to appear hypercritical) in its being strictly antiseptic. Its aroma seems to act simply as a repellant, rendering the wood—particularly that of the red cedar (*Juniperus Virginiana*)—self-defensive against the attacks of worms and insects, and, possibly, against fungi of all kinds, including mildew.

Mem.—A correspondent of the *Country Gentleman* states, in a recent number, that red cedar twigs bound around the bodies of fruit-trees, with the butts uppermost, will effectually protect the trees from all kinds of injurious insects.

NOTES ON THE FEBRUARY NUMBER.

DECIDUOUS SHADE TREES FOR PRIVATE GROUNDS.—To the improver of a new place, unacquainted with but few of our native trees, this will prove an article of interest. You will permit me to say that it would have added to its value had you designated the extent of room required for each tree.

I should like to suggest one or two more trees, which in planting new places of any extent, and even some of limited area, are extremely desirable. One is the Bird Cherry, a rapid-growing tree, with half drooping pensile spray, glossy, clean foliage, white flowers, and long clusters of black fruit. True, it is common in many of our fields, but that does not make it anything the less a tree of merit. It should have from twenty to thirty feet of room, or, in other words, should not be nearer than ten to fifteen feet from another tree—better to have more than less of room, as in time it comes to be quite large.

Another is, the Southern Cypress—*Cupressus disticha.* Also a rapid grower on moist, rich soils, and becoming a very large tree; but when grown in our common dry soils, it makes a tree of only, say, twenty to thirty feet high, very regular and beautiful in form, and with a delicate, yew-like foliage, always attractive.

A CHAT WITH MY NEIGHBORS.—Whoever the writer of this may be, it is evident that, although he may not be accustomed to writing, he has looked to the working of Horticulture understandingly. In quoting his neighbor, he raps some of those men who, caring more for the dollars than the advancement of fruit culture, have not hesitated to propagate and sell grapevines grown from unripe wood of unripe, stimulated, fire-heated plants, thereby creating and entailing an enfeebled habit that does not really belong to the vine, and which never is visible in plants grown only from eyes of healthy plants. I have no objection to the green wood, but it must be taken from a plant growing in a healthy, vigorous manner, not from a thread that knows no life except one of tropical forcing heat.

HARDY PERENNIALS.—I agree with you, that perennials are, as a class, those which should make up the main portion of the flower-garden, when but little care and labor can be devoted to it. Your list is good, but why can not you prevail on Mr. Charles Downing to give the readers of the HORTICULTURIST a short, condensed list of some of the best varieties, adding to the name of each its color and height of flower-stem. Mr. D. I know to have one of the largest collections of herbaceous perennials in the country, and to have given their culture daily attention, as a source of personal enjoyment, for many years. The Messrs. Ellwanger and Barry, as commercial growers, have a very large collection, and one or the other of them should give us remarks and descriptions, especially of those introduced lately.

QUINN PEAR.—It may be a superior pear, but its size is a great objection, and unless better in some respect than Dana's, Hovey, or Lycurgus, it will take a good many years to get it extensively grown. Somehow I have myself, and, I know, so have many others, very little confidence in the committee reports of the American Institute Farmers' Club. The rose-growers abroad, when a new rose is introduced, first learn the name of the introducer, and from their knowledge of that introducer's previous plants, form at once an impression of its value. If the grower's list shows varieties that for years have proved good, and that are retained and grown by cultivators generally, then they eagerly buy; but if, on the contrary, the varieties so introduced have only existed a season

or two, and then become superseded by better sorts, or thrown out because when proved they were not found equal to sorts already known, then the buyer hesitates in purchasing. So with this Farmers' Club; and I have yet to learn of any new fruit or flower, grain or vegetable, which it has commended, that has stood the test of years.

Cordon Training—Bezi de Caen Pear—Ludwig's Cherry—Alida Peach.—All well to be figured, and valuable as records to the pomologist. The cordon practice of growing will enable every garden to have peaches and apricots, etc., every year, because when so grown the trees can be readily protected from late frosts in spring by means of mats or cloths, and from curculio by fine netting. To some such practice as this, and the extended use of orchard houses, I believe we shall have to look for any certainty of peaches to eat from year to year.

Indigestion.—Mr. Ellis hits pretty hard upon some theorists, and I gather from this article that he yet believes in new creations, and that from atmospheric or other invisible causes these fungoid diseases are produced.

Culture of the Apple. — Brother Hicks, you are right; the soils of most lands at the East have lost their valuable ingredients for production of healthy trees and abundance of fruit; and the apple-grower must no longer think he can grow crops of apples and three tons of hay to the acre without supplying freely of manure. As yet, the orchards on the new lands of Indiana, Illinois, and west, produce crops of fine fruit within three or four years from planting out; but their time of failure will soon come, if they do not take heed and learn from the errors, as they are always ready to do from the intelligence, of their Eastern co-laborers in fruit-growing. Reuben.

EDITOR'S TABLE.

To Contributors and Others.—Address all Communications, for the Editorial and Publishing Departments, to Geo. E. & F. W. Woodward, 37 Park Row, New York.

Depth to Plant Grapevines.—*Messrs. Editors:* I am about to plant a vineyard, and have been reading authorities for information as to the depth at which the roots should be planted, but can not find any definite instructions. Can you enlighten me? My soil is a clay, resting on a shoal rock, which in many places crops out within eighteen inches of the surface.

Yours, etc., W. B.

Avon, O., *March* 7, 1867.

[We do not know that we can enlighten our inquirer, but we will cheerfully give him our views, and for a better understanding of the subject will briefly recapitulate some practices and their results. Our earliest vineyards, of any extent, were those planted by Germans, who came to us impressed with the belief that only hill-sides exposed to the south were suited for vine-growing, and that the best vineyards could only be produced from the planting of long cuttings (each with a bit of old wood attached, and having three buds or about two feet long of new wood), in the place where the vine was permanently to stand. All the ground also was to be thoroughly trenched three feet deep; and as the vines grew, every surface root was to be cut away, leaving only the lower

roots to feed the vine. These practices have been, and we believe are yet the rule about Cincinnati and with some growers in Missouri; and cultivators who consider it erroneous to plant a tree deep or dig deep holes for the same, yet commend the planting of grapevines at a depth of eight or ten inches above the upper root. In our belief this is wrong; we think it contrary to the natural action of the plant, which, if left to itself, will be found with the larger portion of its roots near the surface. One, two, or more strong, vigorous roots corresponding with what, if left to itself, are the main vines or body of the plant, will be found running down deep into the earth; but the main support of the plant is obtained from the surface roots lying, say, at a depth of four to five or six inches. In our study of vegetable life, we have come to believe that warmth and air are as essential to the roots as the branches, and that a *healthy* plant can not be grown where the surface roots are destroyed and it be compelled to seek support from roots beyond the influence of and at a corresponding temperature with the atmosphere in which the foliage is existing. From this our inquirer can see that we think deep planting and destroying of surface roots has something to do with the diseases of vines around Cincinnati and elsewhere that it is practiced, and we add to this our theory and belief, that surface roots are essential to the *health* of the vine, because observation of many years has shown us vineyards, on level lands, with roots left nearly in their natural way, growing healthy and producing good crops of fruit.]

MESSRS. EDITORS: Please name three standard pears for profitable market-growing—one early, one late, and one winter.

F. STRONG, Ohio.

[As an early and profitable market sort, or pear root, we name Clapp's Favorite; for the medium time of ripening take Beurre d'Anjou; and for winter, Josephine de Malines. These are all hardy, healthy, moderately rapid growers, productive, and as a rule the fruit is of good, salable market size, even and regular, and of a quality that fits them for the dessert table.]

PSOLONIA, NORFOLK COUNTY, VA., *Feb.* 8, 1867.

MESSRS. EDITORS: My attention to the article on Strawberry Growing, in your February number, induces me to inform you of a result in my garden this last season.

I have a berry sent to me from Horncastle, England, and invoiced the Empress Eugenie, but it so much resembles the Trollop's Victoria that I think it one and the same thing. At any rate, it beats all strawberries I ever tried, and I have had every new variety that has been offered to the public as something wonderful.

I have, by correct measurement, one quarter of an acre in this kind of strawberry, which were planted six years ago where they now stand, and have been so very productive and so profitable for the last three years, that last season I kept a correct account of the proceeds, viz., 500 quarts strawberries sold to a huckster in the city of Norfolk, who resold them in New York, $500. Cost of picking, transportation, etc., $50; net proceeds $450. Amount consumed by my family of twelve persons during the season, no account kept, and we did not stint ourselves.

I will say nothing as to size, only that I grow the Agriculturist, which makes a beautiful berry, but not consistent with description as to size, while the Empress Eugenie is larger in size and more productive than it. Now, sir, you say that, as a rule, these great yields do not hold good. Doctors will differ, and I have to say *it will hold good*, all things considered. For instance, one acre of strawberries properly attended will yield five times as much profit for the same labor that an acre improperly cultivated will do.

Of all the fruits I ever cultivated, the strawberry gives larger returns for kind treatment than any other.

I would like to hear what you have to say relative to a strawberry patch six years old, yielding as mine does, and which has stood this hard winter, and now that the snow has left us, is in vigorous growth, and with fair prospects of making its seventh year as profitable as the last one.

Yours, most respectfully,

F. W. LEMOSEY.

[As our correspondent says, "doctors will differ," and while he thinks he has made a case against our assertion, that large yields and high prices can not be taken as the rule of profit in fruit culture, we do not so consider it. We are much obliged for his record, and trust he will again keep one of the coming season, and report to us; but we don't think the yield he records a large one, while the price at which the fruit was sold certainly is much above the average rule of New York markets. Without referring to published statements, we take our own practical record, and looking back on varieties, their yields, etc., find that in 1847 we gathered and sold from one fourth acre 1,347 quarts, besides what were used in a family of ten grown persons, among them workmen and children who had permission to go upon the ground and eat when they pleased. In 1848, however, the same ground only gave 615 quarts for sale.]

DAHLIAS for early flowering may now be potted, or otherwise placed for heat and growth in the green-house or frame. Plants started now will give flowers in July, but those who desire to grow superior blooms will keep the tubers back a month or two. Some of the best blooms we ever saw were grown on plants not started until the middle of June.

JAPAN LILIES should be got into the ground as soon as possible, and so also gladiolus in some localities and soils; but where there is prospect of frost into the middle of May, it is better to delay planting the latter until the last of the month.

HERBACEOUS PEONIES and plants may yet be divided and planted, and the tree peonies increased by grafting on the roots of the herbaceous sorts.

ALL beds or borders for flowering plants, roses, etc., should be made deep and rich with soil. Always obtain as much fresh loam as possible, and add to it well-rotted animal manures, but not so liberally as to make it what is termed "fat" or soggy.

GET the cultivator and light plow going among your vineyards, and fruit orchards, and gardens as soon as the ground will answer. Don't work clay land while it is wet. Plow very shallow next the bodies or main stems of trees and vines, going deeper as you work from them.

IF you have neglected to prune back your hardy roses, do it now, cutting the hybrid perpetuals close to the ground, and the mosses down one half. Also, if a tree has escaped its due washing, and has upon it *coccus*—little white spots—insects, or bits of moss, etc., get some strong soapsuds, or weak lye, or potash water, and wash it all over before the buds push.

TUBEROSES and AMARYLLISES should be potted and placed where they will get a gentle heat to bring them forward for planting out in open ground, and give early flowers.

ANNUALS of many sorts should be sown now in pots or a gentle hot-bed frame, for transplanting, and thus hastening the early blooms of the flower garden. In some sections they can be sown at once in the open ground.

SPRING budding with the peach, magnolia, etc., may be performed successfully this month. Cut the buds some days, say a week or so, in advance of setting, and keep them in a cool place, letting the tree get a little advance of the cion or bud.

CHRYSANTHEMUMS may be divided and replanted now, and whenever any cuttings are ready, propagated therefrom.

FUCHSIAS should now be repotted, and headed in pretty severely. It will give them more vigorous growth, and cause them to form a better shape.

VINEYARD vines should now be tied neatly to the wires or stakes, and as the buds break, watched carefully to see if they do so evenly. Should the end buds swell strongly, while the middle buds remain dormant, bend the cane over in the form of an arch, and tying keep it there until all the buds have burst forth alike. In some sections where we are read, the buds around the crown or base will now require watching, and all that start over and above the number wanted to form canes another year should be at once rubbed out.

WALKS and ROADS require considerable care at this season to keep them smooth and level. Rake and roll frequently, for if now neglected it will require weeks to bring them again into good order; besides, a neglected walk or road always looks as though the gardener or owner had planned more than he could well accomplish, and this one error thus become an indication of imperfect judgment.

PLANTS that have been kept in pits should now be exposed to light, and air admitted freely.

LAWNS should be rolled and mown frequently at this season; by so doing the roots or crowns will tiller more abundantly, and each rolling while the ground is yet soft will aid in pressing into smooth surface any inequalities.

CUTTINGS of currants, gooseberries, flowering shrubs, etc., may yet be made and planted; but they should be carefully mulched, else the feeble young roots which they will make in the early season will dry up on approach of heat and drought.

PITTSBURG, *7th March*, 1867.

MESSRS. THE EDITORS OF THE HORTICULTURIST, NEW YORK: *Gents.*—Please insert the following.

Let me call the attention of "Reuben" to a letter written by N. Longworth, Cincinnati, 18th February, 1850, addressed to the Wine Committee of the Horticultural Society, and published in the *Western Horticultural Review*, "who being dead yet speaketh."

"I recollect some years since, when my vineyards suffered severely from the rot, some of my lazy tenants, who left half their vineyard in grass and weeds, which escaped the rot, while the clean vineyards of their neighbors adjoining, and their own portion cleaned, suffered badly from the rot, attributed their escape to their idleness in not cleaning their vineyards. I was and am unwilling to believe this. 'But facts are chiels that winna ding, and dinna be disputed.' I can scarcely believe this, for though I can not fully believe the doctrine that every act of an idle sinner is hateful in the eyes of his Creator, I am slow to believe he holds out inducements to idleness. His long forbearance and mercy to idle sinners compel me to believe he shows more mercy to them, and views their transgressions with more lenity, and makes more allowance for their bumps, natural propensities, education, and example than their more fortunate and perfect fellow-mortals. But I would still call the attention of vinedressers to the subject as worthy of note."

Perhaps Reuben thinks, with Charles Lamb in one of his ideal convolutions, it is no matter what Nicholas Longworth said, "because he is dead."

In the weedy vineyards that Reuben speaks of as having as much rot as those cleanly weeded, let me ask, Were the weeds free from rot?

JOHN F. BENNETT.

THE FIRST STRAWBERRIES.—Mr. Watson, the proprietor of Rosedale Nursery, presented us yesterday with the first strawberries of the season. They were well-matured, ripe, and juicy. We think this a little ahead of any one else, which speaks loudly in favor of our county both as a fruit-growing and berry-producing section. —*Southern Banner, Brenham, Texas.*

WOODEN FLOWER-POTS.—At a recent meeting of the Chicago Horticultural Society, Mr. Pool introduced wooden flower-pots, as a probable improvement over earthen. They were turned from whitewood or poplar, were light, less liable to break, and claimed better for growing plants than earthen.

It is well known that the Chinese use wood, and are generally successful culturists. Wood is not as rapid or good conductor as earthen, and when the soil is once warmed in the pot, its temperature can perhaps be kept more even and regular than in earthen pots. For plunging purposes we should think there would be a liability to softening and decay, and perhaps an inducement to the roots to grow to the sides of the pots, and thus make repotting a difficult matter.

TRANSPLATING.—We write line upon line relative to the subject of transplanting, because at this season it is a labor of almost daily occurrence with every horticulturist, and we feel that he can not too well consider the importance of certain principles in its practice. All removals of trees or plants, except those grown in pots, must of a necessity involve a certain amount of injury and reduction to the roots; and as roots are the important medium to support life and growth, their reduction at a season when the tree is nearly in a dormant condition causes less injury than when there is vigor of growth and demand for life-supplies by swelling buds or foliage. We know some advise late spring planting, and if the spring is backward, or great care be taken after planting, the work may be successful; but, as a rule, the practice should not be commended. The moment that buds begin to push, that instant the roots resume active functions, and any injury by breaking, etc., is more sensibly experienced than when the same injury has been created during the perfect dormant condition of the plant, and a reasonable time been given it to callus or heal over before being called on for labor in supplying buds and foliage with food for digestion. Our advice to all who must plant in the spring is to perform the work as early as possible.

As soon as strawberries are in bloom they should be carefully looked over, and any chance seedlings or strictly staminate and unproductive flowering plant removed.

CREDIT TO WHOM CREDIT IS DUE.—We are always glad to see our Table matter items republished in our exchanges, because it satisfies us of their value; but we feel that we expend time and money in the preparation, printing, etc., and that due credit should be given for such matter as our friends choose to reprint. We hope our co-workers in editorial labors will remember this hint, and simply attach the word HORTICULTURIST to such items as they choose to extract from our pages.

THE best manure for all sorts of berries is undoubtedly vegetable mold, decayed leaves or straw, etc. The strawberry and raspberry particularly are great exhausters of vegetable matter in the soil, and a free application of leaf mold we have known result in giving good crops from land on which without such application the product was very unsatisfactory.

DWARF BOX EDGINGS should be planted this month; press the earth firmly around the roots or cuttings with the foot, but when finished leave the surface level and lightly raked.

GRAPEVINES in the green-house should at this season be abundantly supplied with moisture, either by syringing or freely wetting the walks, or both. Superfluous shoots springing from the base of the spurs should be rubbed off, and laterals stopped when they have made three leaves beyond the fruit-buds. Tie up carefully and keep all clean and neat about the house.

WHEN making new strawberry plantations, set the plants at distances of about eighteen inches in the row, and the rows two to two and a half feet apart, and expect to keep them afterward in hills, as by so doing a larger berry and more quantity is obtained than when grown in matted beds. Do not wait for the weeds to grow so large as to smother the strawberry vine before commencing with the hoe, but remember that it is easier and less labor to hoe over an acre three times when the weeds are only one inch high, than to hoe and weed it once after they get to be six inches, a foot, or more.

OGDENSBURG, *Feb.* 12, 1867.

MESSRS EDITORS: I have a green-house (lean-to) built against the south end of my dwelling, 40 feet long by 20 feet wide, fronting south, heated by a brick furnace and flue; furnace is in north side near N. E. corner; the flue runs round east, south, and west to chimney in dwelling north. Chimney is 40 feet high, inside capacity 8 by 20 inches, inside capacity of flue 8 by 10 inches with a rise of 6 inches in 12 feet. It works well at all times, except with a blustering south wind, when the smoke beats back out at the furnace door and damper, and the fire does not burn well. I use wood for fuel. Can you, or any of the readers of the HORTICULTURIST, tell me a remedy, and oblige, respectfully yours,

THOS. LAWRENCE?

[We should imagine that the defect was not in the flue, but in the chimney; should advise that you put a smoke-jack on your chimney-top.]

BLACKBERRY planting should be among the first of this month's labors, if not already completed. A deep, moderately light and rich soil suits the blackberry best, but it is a plant that can be profitably grown in any good garden soil. Plants that were grown last year from pieces of roots, and have now a good crown and roots, are the best; but strong sucker canes will give a little fruit this season. Cut the first-named back to two buds, and the latter to two feet. In planting, cover the crown only about two inches deep with soil, and then add a light mulch of some material.

MELONS, Lima beans, etc., may now be planted in pots, or on pieces of sod, and placed in a partially spent hot-bed, or a new bed made so as not to furnish too strong heat. A gentle bottom heat will bring them forward more natural and healthy than one rank and of high temperature. Give air freely when it can be done, and not chill the soil or plant.

CAMELLIAS now making growth will require free watering and syringing. An application of liquid manure once a week will assist them.

TREES that have blown partially over should be at once righted, and staked to hold them in position until they have again made growth and new roots.

IN uncovering tulip and hyacinth beds, or in working among them at this time, be very careful while loosening the soil and giving a clean and neat appearance, not to injure the buds or foliage. They are very delicate at this time, and a slight injury will be plainly perceptible in a few hours thereafter.

WHEN first stirring the soil, on seed beds, around the young growing plants, use a steel rake rather than a hoe. One trial will satisfy any one of its superiority.

In the January number of your paper Mr. Husmann makes a liberal use of my name relative to the comparative merits of the Norton and Ives seedling grapes, and says, "in Missouri he can average 500 gallons to 600 gallons per acre easy enough with Norton's Virginia." I therefore stand corrected as to Missouri, but will say in Ohio it never has given us over 200 gallons per acre.

Mr. Husmann attributes my preference for the Ives to the "fact that the Norton is one of the hardest vines to propagate—the Ives one of the easiest," and is right in doing so. I have been taught by Nature that she does nothing in vain, "*that wherever she designs a production, she disposes a way proper for it.*"

Take the cuttings of the Ives, and let the most unskillful hand plant them in the open field, most of them will grow. Take the cuttings of the Norton, with the assistance of art and a hot-bed, you can only force a few unwilling plants.

We can follow Nature farther and make wine from the Ives at one fourth the cost making it from the Norton.

I shall continue to propagate and urge the cultivation of the Ives and Norton Virginia grapes, hoping thereby to assist in turning our barley fields into vineyards, and making malt liquors give place to native wines. When this good time shall come, having Nature for our guardian, she will invite us to use the Ives wine freely, and on account of the great strength of the Norton wine, will admonish us to use it for "medical purposes," and to draw old topers from malt and distilled liquors.

Respectfully, J. M. M. Cullogh.

New Pears.—We notice in the Gardener's Year Book, published in London, England, and edited by Robert Hogg, Esq., the pomological director of the Royal Horticultural Society, descriptions of four new varieties of pears that originated with a Rev. Mr. Huyshe, and the stock of which has been by him presented to the Royal Horticultural Society of London. Three of these varieties have been produced from pips of the Marie Louise hybridized with Gansell's Bergamot, as follows:

Huyshe's Victoria.—Fruit of medium size; form, similar to Beurre d'Aremberg; yellowish ground, with veins of cinnamon russet; flesh, yellowish, juicy, rich, sugary, and vinous; season, December.

Huyshe's Prince of Wales.—Fruit, large; lemon-yellow ground, veined with cinnamon-colored russet; flesh, yellow, fine-grained, very juicy, rich flavored.

Huyshe's Princess of Wales.—Fruit, medium size, varying in form; skin, a smooth lemon-yellow ground color, sprinkled with patches, veins, and dots of pale cinnamon-colored russet; flesh, deep yellow, melting, high flavored, rich, and juicy; November. The fourth variety is said to have been produced from a seed of Beurre d'Aremberg fertilized by Passe Colinar. It is named

Huyshe's Prince Consort.—Fruit, large, oblong, obovate, pyriform; skin, grass green, much covered with russet, exposing the green ground only in mottles; flesh, yellowish, coarse-grained, very juicy, melting, not buttery, with a mellow vanilla flavor, highly agreeable; early winter. In the account given, Mr. Huyshe states that in growing seedling pears, he is now careful to sow only the *round* pips, not those that are flat-sided.

Gooseberries and Currants should be planted without delay, if not already done. Their pruning should also be at once performed; cut out all feeble, weakly shoots, and head back the strong ones one third to one half of last season's growth.

All borders or beds not yet cleaned of old haulm or other refuse should be at once attended to, and the ground around all perennials, etc., manured and lightly dug or forked over. It would have been better had this work been done last fall, but now it should not be delayed a day.

FRUITS FOR KENTUCKY.—The following lists of fruits are recommended for *general cultivation* in Kentucky by the Kentucky Horticultural Society, being selected from the hundreds of varieties exhibited on that Society's tables during each fruit season, for the last ten or fifteen years, and are recommended as the best that can be grown in the soil and climate of that State with satisfaction and profit. Any well-known and well-tried local variety, in any particular neighborhood, could be added to the list if desired, especially if it is a good winter apple.

As a general rule, an extensive practical experience has established the fact, that the most popular winter apples in the Northern States ripen prematurely in that climate, and drop from the trees early in the autumn, before the fruit is more than half developed. Of course, such imperfectly matured fruit can not be kept, as it soon decays.

Apples.—Striped Juneating, Early Harvest, Red Astrachan, Carolina Red June, Gravenstein, American Summer Pearmain, Golden Sweet, Jersey Sweet, Maiden's Blush, Porter, Fall Queen, Fall Pippin, Pennsylvania Red Streak, or Hays' Wine, Rambo, Wine Sap, Ben Davis, or New York Pippin, Moore's Sweet, Milam, Rawle's Janet, Little Romanite. The following kinds do well in some localities: Primate, Rome Beauty, Yellow Bellflower, ripens in December, but falls prematurely; Yellow Newtown Pippin, bears well on strong clay soils, and will keep till April. For preserving, the Transcendent Crab, for size, beauty, and good quality, is superior to all other kinds.

Pears.—Where there is no want of ground space, pear-trees on the quince stock, or dwarf trees are not recommended, as standard trees come almost as soon in bearing, or can be made to do so, by *shortening-in* the new shoots in the latter part of July. The following have been found the most satisfactory in regard to quality, productiveness, and comparative freedom from disease in trees and fruit. This list will afford a succession of fruit from July to November inclusive, ripening about in the order as named: Madaleine, the best early pear; Doyenné d'Eté, small, but productive; Buerré Giffard, promises well; Osband's Summer, promises well; Bloodgood, quality best, but bearing irregular; Seckel, superior quality; Belle Lucrative, or Fondante d'Automné, very good; Buffum, best, and productive; Tyson, best quality; Bartlett, large and fine; Kirtland, highly recommended by all who have tried it; White Doyenné, fruit cracks badly in some localities; Doyenné Boussock, recommended for further trial: Lawrence, promises well; Glout Morceau, good.

Grapes.—The Concord Grape has been widely disseminated, and has given general satisfaction. Norton's Virginia, as far as tried, seems remarkably hardy, vigorous, and productive; the fruit is good for table use, and makes a strong, rich, dark-red wine. The Clinton, if the over-productiveness of the vine is checked by thinning out the bunches, makes very handsome clusters, maturing with the Catawba, and doubtless will make a good, hardy, healthy wine grape. Taylor's Bullitt is a good, sweet, green-colored grape, that is said to make a very fine wine. It bears heavy crops wherever the blossoms are sheltered from the weather; if too much exposed during wet springs, the impregnation is imperfect, and the productiveness of the vine is consequently diminished. Many other kinds of grapes that have been tried can not be recommended for extensive planting or vineyard culture.

WHAT varieties of strawberries are best for a private garden or family? B. P.

[Our first reply to this inquiry would be Hovey's Seedling, Triomphe de Gand, and Wilson's Albany, because all are good, all are hardy, strong vines, and the latter always sure to give a crop, although its quality may not be of the highest excellence. Second thoughts, however, bring

to mind that climate and soil are known to have as much, or perhaps more, to do with the success of the strawberry as with any variety of fruit, we therefore had best say that if your soil is a good, strong, rich clay loam, then the three above-named sorts will succeed, and especially if you grow them in hills; but if your soil is of a sandy or gravelly character, then only the Wilson will prove desirable, and that only because of its productiveness. The New Jersey Scarlet, Downer's Prolific, and Green Prolific we have seen grown with great success and satisfaction in sandy or light dry soils. Jucunda, a variety now much praised by some parties, we have examined three or four years, and while under high cultivation and care it has given abundance of fine, large fruit, its vine is to a degree tender, and often grows so feebly as to kill out during winter, unless carefully protected. Ida, Mead's Seedling, and a host of other sorts are new, and each has its advocate; but after all, we think our chances for abundance of good fruit would be as favorable with the first six varieties we have named, as with those of more recent introduction.]

I HAVE a small garden, and room for three grapevines. Now, what shall I plant? Yours, S. HANSON, Iowa."

[The testimony of the Western New York Fruit Growers' Society, as well as that of all other meetings, and of most cultivators, is, that for rich garden soils there is no one grape superior to the Delaware. Not doubting the correctness of this universal judgment, we remember that our visits to gardens often bring us in those where rich soil is the exception rather than the rule, and that particularly just where the grapevines are planted. We therefore, without knowing just the soil you have, and the care you propose to bestow on your vines, would advise as three sorts, hardy in the vines, early of ripening, and of above average good quality, the Crevelling, Rogers' No. 4, and Rogers' No. 15.]

AZALEA, "HER MAJESTY."—The London *Florist* says, "Her Majesty is a sport from Madame Miellez, and one of the finest Azaleas which has yet been obtained, both as regards form and substance, while in color and marking it is quite distinct from all others. The flowers are of the full average size, and the color is a soft lilac tinted blush, more or less dense, white at the margin, thickly spotted with crimson in the upper part, and marked with variable stripes, or sometimes broadish bars of deep, rosy purple. The plant is a strong, robust grower."

IN the January number I read the notice about mice having girdled your friend's trees. But let me tell you that they have done here immense damage. For this two days of thawing weather we have been occupied in the orchard and nursery to cover the girdled parts with liquid wax. In some places hardly a tree escaped. I have just received a letter from a friend in East Hamburg, who says: "You can not imagine the amount of damage that has been made through this section by the mice."

Tramping the snow around the trees is practicable in an orchard of standard trees, but is difficult in a dwarf pear orchard of close planting and a three-feet deep snow; and entirely impracticable in a nursery where the snow-drifts are from three to five feet high. Is there no remedy of a more general and easier application? Yours, etc., G.

BUFFALO, N. Y.

ALL old strawberry beds should be thoroughly cleaned of weeds before the blossoms open. Use a fork hoe, and afterward rake clean with a steel rake.

IF coal tar is to be used around the crown of peach-trees to prevent the destructive ravages of the peach-worm, it should be applied *before* the sap is in free circulation and foliage grown.

PITTSBURG, *Feb.* 11, 1867.

MESSRS. THE EDITORS OF THE HORTICULTURIST, NEW YORK—*Dear Sirs:* Mr. John Ellis (Fox Meadow), White Plains, in this month's number of your magazine says that moonshine is as likely to produce "rot" in grapes as lightning, and asks, "We believe there are thunders and lightnings in California?"

Lest his ill-considered remarks should tend to mislead, I answer, as publicly as he asks, that if he will examine the meteorological reports for California for the summer months, he will find the answer to be "no."

No rain, no thunder, no lightning, no rot.

In return, let me ask Mr. Ellis—Is there moonshine in California?

He may know as much about the one as the other. I am yours truly,

J. F. BENNETT.

ABOUT ROSES.—Few who grow roses for the enjoyment of the flowers care for more than twelve to twenty varieties; but to select these few sorts out of the many hundreds catalogued and designated as "beautiful," "excellent bloomer," "large and fine," and other expletives of their values, is a task of greater magnitude than dreamed of until undertaken.

The increase of new roses has come to be rather an evil than a joy; it is a tax on our patience and our purses; for each lover of roses, upon reading the glowing accounts of new ones, is induced to buy and add to his collection until there is no room for any of the plants to fully develop themselves, and the collection is burdened with varieties without very marked distinctions of flowers. In England they have one grower who, seeing this increase, and from personal observation and association knowing the points of value belonging to each, has from time to time depicted them, and thus those who have heeded his remarks have been saved the expense and annoyance of purchasing and caring for many varieties, only to find their want of superiority over kinds already in their grounds. As yet, we have no such man, but the exigences of the case now demand one, and we hope the capabilities of a Parsons or a Saul will soon be exhibited in giving us a true statement of the varieties now in cultivation, and hereafter commendations or condemnations of new varieties as they appear.

SOUTHSIDE, S. I., *Feb.* 23, 1867.

EDITORS HORTICULTURIST, NEW YORK—*Gentlemen:* Do me the favor to answer the following queries:

1. Will it injure a young orchard (planted last fall) to plant a crop of *oats* on the ground occupied by the trees?

2. Will it be injurious to plant a crop of oats as above, if a space of three feet clear is left around each tree?

Please answer in next number.

Very respectfully,

C. E. R.

[*Ans.* 1. Certainly it will. Oats or other grains exhaust the soil of the very components required by the trees. We have watched the practical working of this many times, and therefore do not speak from theory alone.

2. A space kept clear around each tree unquestionably would lessen the injurious results, because it would give just so much ground otherwise unoccupied, and for the roots of the trees to supply themselves with food. Our advice is to keep out oats or other grains entirely. If you wish to seed down to grass do so, without regard to the grain crop. If you must grow oats, then keep well hoed, three or four times during the growing season, a space not less than eight feet diameter for each tree.]

ASTERS.—Before sowing seed of the German quilled or peony-flowered Asters, make your bed of soil rich and deep by working into it liberally well-rotted compost manure.

We call the attention of our readers to our new club rates; these were suspended during the war, and are now restored. The Horticulturist opens this year with the largest list of subscribers we have yet known. Satisfactory as it is, we believe it can still be increased, with mutual benefit to both readers and publishers. We hope, therefore, that all will avail themselves of the low club rates offered, which, where twenty copies are taken, reduces the cost to one dollar and twenty-five cents per copy. The present standard will be maintained except where improvements can be made.

The double white pyrethrum and the double white milfoil are two valuable and suitable plants for placing on the graves of deceased relatives or friends.

CATALOGUES, Etc., RECEIVED.

Washburn & Co., Boston, Mass., Amateur Cultivator's Guide to the Flower and Kitchen Garden, 140 pages, with illustrations.

T. C. Wendel, 518 Washington Street, Boston, Mass. Flower and Garden seeds.

Bronson, Graves & Selover, Geneva, N. Y. No. 1, Descriptive catalogue, Fruit department; No. 2, Ornamental department.

Alfred Bridgeman, 876 Broadway, New York. Flower seeds.

John Saul, Washington, D. C. Descriptive catalogue of new, rare, and beautiful plants.

W. & T. Smith, Geneva, N. Y. Catalogue of Geneva nurseries.

F. C. Johnson & Co., New Albany, Ind. Fruit-trees, vines, roses, etc.

R. Halliday & Son, Baltimore, Md. Roses, verbenas, and bedding plants.

Vilmorin, Andrieux & Co., Paris, France. General Catalogue of seed.

Hubbard & Davis, Wayne, Mich. Trees, shrubs, and plants.

H. A. Graef, 14 Court Street, Brooklyn, L. I. Description of portable box for protecting trees.

J. W. Coburn, Flushing, L. I. Prince nurseries.

John Crane, Union, N. J. Price list of small fruits.

George Such, South Amboy, N. J. New and beautiful plants.

R. G. Hanford, Columbus, O. New plants.

J. W. Manning, Reading, Mass. Catalogue of Reading nursery.

W. S. Little, Rochester, N. Y. Circular of wholesale prices.

BOOK NOTICES.

The *Riverside Magazine* for young people, published by Hurd & Houghton, New York, price $2 50 per annum.

Three numbers of this magazine have been issued, and the promises of the publishers have been fully kept. A variety of entertaining and instructive articles for young people of both sexes appear in each number. The wood-cut illustrations and typography are in the very best style. This work deserves, and no doubt has, a wide circulation.

ACKNOWLEDGMENT.

We are indebted to J. J. H. Gregory, the extensive seed grower and dealer of Marblehead, Mass., for a collection of garden seeds, many of them varieties of late introduction. They will all receive the best of care, and we hope to give a good report of them next fall.

Also to Messrs. Washburn & Co., Boston, for a package of seed of the new Russian sunflower.

Our thanks are due to John Saul, Esq., of Washington, D. C., for a fine collection of the new Zonale and Nosegay Geraniums; also varieties with variegated leaves, among which "Mrs. Pollock," with splendid foliage of green, crimson, and yellow; Golden Nugget, with bright yellow leaves of large size; and Scepter d'Or, with golden, yellow leaves, marked with a bronze red zone, are the most worthy of notice. We shall report upon them all in the fall.